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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,747	01/02/2002	Gerald Tromblee	PCC 104	2955
32047	7590	12/06/2004	EXAMINER	
GROSSMAN, TUCKER, PERREAULT & PFLEGER, PLLC 55 SOUTH COMMERICAL STREET MANCHESTER, NH 03101			PATIDAR, JAY M	
			ART UNIT	PAPER NUMBER
			2862	

DATE MAILED: 12/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/038,747	Applicant(s) TROMBLEE ET AL.	
	Examiner Jay M. Palidar	Art Unit 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-14 and 17-56 is/are pending in the application.
- 4a) Of the above claim(s) 17-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. This communication is in response to applicant's amendment received on September 24, 2004.

2. Claim 1 is objected to because of the following informalities:

In claim 1, at line 4, the phrase "comprising a magnet" is vague as to what is comprising a magnet; Is it position sensor, sensor control element or sensor elements? The phrase "comprising a magnet, relative to said array of sensor elements" does not make sense.

Appropriate correction is required.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5,8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tolmie in view of Sumead.

As to claims 1,11, Tolmie discloses a non-contact position sensor with a plurality of Hall effect sensor 10-16 (col. 2, line 61) configured in an array (fig. 1);

each sensor element configured to provide an output associated with each of a plurality of positions of a sensor control element (col. 3, lines 3+); a magnet 20 (Fig. 1); whereby a separate combination of the outputs is provided for each of said positions (Fig. 2). Tolmie fails to show a biasing magnet adjacent to the sensor. It is very well known and common knowledge in the magnetic field art to use a biasing magnet with Hall sensor or Magnetoresistive sensor. This feature is taught by Sumead. Sumead discloses at col. 1, lines 19+ and also in figure 1 that a biasing magnet is known in the art for Hall sensor for biasing purposes. Consequently, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Tolmie to have included a biasing magnet as taught by Sumead to enhance the sensitivity of the position determining device.

As to claims 2,9, Tolmie discloses said sensor elements being in a linear array (Fig. 1).

As to claims 3,4, the sensor arrangement in Tolmie is configured to provide an associated output in response to movement of said sensor control element along or across said linear array to each of said plurality of positions (Figs. 1,3,5).

As to claim 5, the sensor elements 60-64 in Tolmie are configured in an arcuate array (Fig. 6).

As to claim 8, said magnet 65 in Tolmie has a generally arcuate shape (Fig. 6).

As to claim 10, said magnet 20 has greater length than a distance between adjacent ones of said Hall effect sensors (Figs. 1,3,5).

As to claims 12-14, the magnet comprising at least one North and at least one South magnetized region (Figs. 1,3,5); the North and South magnetized region are adjacent to each other. The movement of magnet would cause changes in said Hall sensor outputs at two different rates as shown in figs. 1,3,5 and e.g. fig. 2).

4. Applicant's arguments with respect to claims 1-5,8-14 have been considered but are moot in view of the new ground(s) of rejection.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,612,404 and 6,424,928 are cited to show a plurality of hall sensors with magnets.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay M. Patidar whose telephone number is 571-272-2265. The examiner can normally be reached on M-Thur 7:00-5:30.

The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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December 2, 2004